

# Little Orphan Radio

## GMRS: A personal communications radio system

While Dick Tracy amazed 1940 era Sunday comic strip readers with his crime fighting wrist radio, the Federal Communications Commission actively tried developing 10 MHz of the UHF spectrum as the Citizens Radio Service (CRS) or Class A radio.

Five decades later, Dick Tracy moved to wrist television and CRS became the General Mobile Radio Service (GMRS), UHF's "Little Orphan Radio". Band hungry predators constantly threaten GMRS's space and if it hadn't been for Daddy Warbucks (aka Personal Radio Steering Group) Class A service might have vanished without as much as a trace. Class A once held sway over 460.0 to 470.0 MHz, but today it occupies only 4 percent of that space.

Under the FCC's Part 95 rules it's an alternative to the overcrowded CB channels and allows almost anyone who obtains a license to utilize the band for personal communications. The objective is establishing a functional instead of a recreational communication network, sharing a limited amount of space in a rational manner.

Few people paid attention to Class A until CB radio underwent a severe crisis in 1976. Hobbyists had been slowly building CB into a reasonable alternative to ham radio when the 1972 Arab oil embargo hit the United States. Suddenly, drivers made CB radio a resistance symbol.

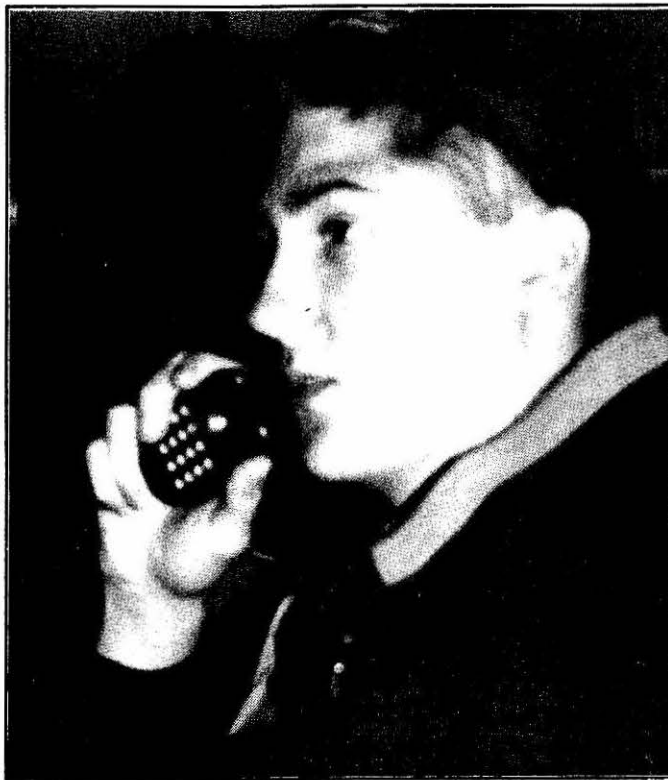
Eighteen wheel cowboys challenged the interstate speed limits and the "smokies" who enforced the laws. All one needed to join their ranks was a

couple of bucks and a nearby radio store. Eventually, even drug stores sold 29 MHz transceivers alongside the candy bars and toothpaste.

By 1976, CB had deteriorated into a rowdy bunch of outlaws making foul-mouthed transmissions, violating the rules of licensing and identification with impunity, and driving the average citizen off the band.

However, the failure of CB did not lessen the need for a system of personal radio communications. By creating the Personal Use Radio Advisory Committee (PURAC), the FCC attempted to restore sanity to the bands. As a committee of respected operators, PURAC backed the commission despite derogatory remarks and name calling.

PURAC also created a subcommittee to study Class A radio. This group made over a hundred recommendations in their 1978 report and Class A became a personal band known



By Everett Slosman

as GMRS.

GMRS attracted individuals wanting a sensible personal communications band. It also attracted the "CB good guys"; organizations like REACT that assist public safety agencies, monitor traffic emergencies, and help motorists.

Both claimed GMRS as their rightful place in the spectrum, so clashes were inevitable. The common ground which allows them to cooperate and share the band is distaste for the undisciplined antics of "jaw-

boners" and "linear amplifier freaks." Personal radio activists formed local citizen groups to lobby the FCC and comment on rule-making inquiries and proposals. They published newsletters keeping the network of informal coalitions in touch. Eventually, the Personal Radio Steering Group (PRSG) took on the role of Daddy Warbucks and "Little Orphan Radio" had protection.

Under the new rules, only individuals can apply for a license or significantly modify an existing one. Only corporations, partnerships, and government agencies licensed prior to January 1, 1989 are grandfathered in and these have been strongly encouraged to apply for private land mobile licenses.

Any American, 18 or older, not registered as a foreign gov-

ernment representative, can apply for a license. Applications and assistance are available from regional FCC offices or PSRG.

All licensees must share the band by operating only on those frequencies specifically assigned in their license. Individuals can also use channel 675 for nationwide travelers assistance and emergency calls. Base and mobile stations are limited to 50 watts.

Split frequencies between the assigned channels are available for individuals operating simplex low power base or mobile units using not more than 5 watts effective radiated power.

The FCC prohibits hobby-style communications and "CQing." All transmissions must be in-the-clear, base-to-mobile, or mobile-to-mobile FM. Rules forbid auto phone patches.

Transmissions rarely travel more than 25-30 miles and mobile signals about two miles. Repeater stations insure adequate local coverage. Most are operated by public service organizations that monitor their assigned frequency and provide retransmission services for those authorized to use them.

A number of repeaters use the familiar CTCSS (Continuous-Tone-Controlled-Subaudible-Squelch) to activate their equipment. But, repeaters also use other access systems such as "Private Line" or "QC". Tones run between 67 and 220 Hz, so it is doubtful they can be heard on the average scanner. Though users need an agreement with a repeater operator, travelers, in the interest of public safety and convenience, can usually access one on channel 675 when they



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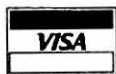
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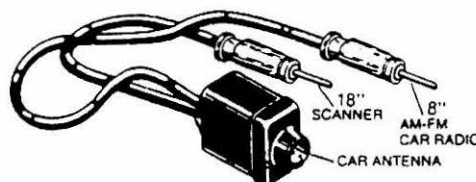
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need help.

A bare-bones setup with the two assigned frequencies installed runs about \$150-300. Simple base stations with tone capability cost between \$500 and \$2000. Then, there's the cost of an antenna—between \$75 and \$100.

Corwin D. Moore, Jr. is PRSG's Administrative Coordinator and discussing GMRS with him is talking with a true believer. GMRS licensees are extremely vocal in their praise of the system and even PRSG's fact sheet reveals a missionary's zeal. "GMRS has evolved in the direction of becoming the dispatch system for organizing the activities of one's life, to coordinate in mutual enterprise with the members of one's family, with other licensees, etc."

The organization claims an historic position as the band's national advocate; the promoter of "specific, limited, non-superfluous and non-frivolous" functional UHF mobile radio. Operators shun conversational communications more appropriate to CB, ham bands or telephone. Otherwise, important communications such as traveler's aid or reporting local emergencies, would be delayed. So, catching transmissions on a scanner requires patience.

Licensees tend to be more family and friends oriented than other radio buffs, according to Moore, who describes them as people sharing a number of non-broadcast activities and hobbies.

Start monitoring GMRS by scanning local repeater frequencies. Duplex transmissions start on the low end of a paired frequency, so "ride" the 462 MHz side of the spectrum.

PRSG helps with everything from equipment prices to proper on-air station identifications. They print a bibliography, fact sheets, and a National Repeater Guide. They also run a computer

## GMRS REPEATER STATIONS

This repeater station list came from information furnished by the Personal Radio Steering Group.

State	Location	Channel
Alabama	Birmingham	725
	Eufala	550
	Huntsville	550, 575, 600, 675, 725
	Mobile	625
Alaska	Anchorage	650, 675
Arizona	Flagstaff	675
	Kingman	700
	Phoenix	550, 625, 650, 675
	Prescott	550
Arkansas	Tucson	675
	Yuma	675
	Fayetteville	675
	Little Rock	675
California	West Memphis	675
	Bakersfield	550, 575, 675
	Barstow	675
	Bishop	675
	El Centro	675
	Eureka	675, 625, 650
	Fresno	600, 625, 675
	Los Angeles	550, 575, 600, 625, 650, 675, 700, 725,
	Palm Springs	675
	Sacramento	550, 600, 675, 700
	Salinas	550, 575
	San Diego	550, 575, 675, 725
Colorado	San Francisco	550, 575, 600, 650, 675, 700
	San Luis Obispo	675
	Sussexville	675
	Ukiah	675
	Aspen	550
	Craig	550
	Denver	550, 575, 600, 625, 650
	Durango	550
	Vail	550, 625, 650, 700
	Greenwich	550, 700
	Hartford	575, 600, 625, 650
	New Haven	600, 675
Conn.	Dover	600
	Rahoboth Beach	575, 600, 675
DC	Wilmington	675, 700
	Washington	550, 575, 600, 625, 650, 675, 700
Florida	Clearwater/Tampa/St. Pete	550, 575, 600, 625, 675, 700
	Daytona Beach	600, 675
Georgia	Ft. Pierce	700, 725
	Gainesville	675
	Jacksonville	550, 575, 700
	Lake City	700
	Lakeland	650, 675
	Melbourne/Titusville	550, 600, 675, 700
	Miami/Ft. Lauderdale	550, 575, 600, 625, 700, 725
	Naples	650
	Orlando/Disney World	550, 575, 660, 625, 650, 675, 700
	Pensacola	675
	Tallahassee	575, 650, 675
Hawaii	Albany	550
	Atlanta	550, 575, 600, 625, 650, 675, 700
	Macon	675
	Ringgold	550
	Valdosta	675, 700
	Maul Island	550
	Oahu Island	625, 650, 725
	Boise	700
	Coeur d'Alene	700
	Lewiston	650, 675
	Twin Falls	600
Idaho	Carbondale	550
	Chicago	550, 575, 600, 625, 650, 675, 700, 725
	E. St. Louis	600, 675, 700, 725
	Effingham	675
	Moline	600, 675
	Peoria	550, 575
	Peru	550, 675
	Rockford	625, 650, 700
	Springfield	600, 675
	Anderson	550, 675
	Evansville	550, 675
Illinois	Fort Wayne	675, 725
	Gary	550, 575, 600, 650, 675,
	Indianapolis	650, 675
	Kokomo	550
	Lafayette	550
	Marion	675
	New Albany	600, 675, 725
	South Bend	550, 675
	Vincennes	600, 675
	Warsaw	550
	Amee	725
Indiana	Burlington	675
	Council Bluffs	675, 700
	Davenport	625
	Des Moines	600, 625, 650, 675, 700
	Iowa	675, 700
	Burlington	675
	Council Bluffs	675, 700
	Davenport	625
	Des Moines	600, 625, 650, 675, 700
	Iowa	675, 700
	Burlington	675
	Council Bluffs	675, 700

continued

bulletin board. The BBS allows open registration for visitors. Each receives an hour of connect time daily and can read all 14 bulletins explaining GMRS. Subscribers receive additional time plus membership conferences and messaging. Their computer automatically recognizes a caller's modem configurations. However, it's a good idea to set your unit at 2400 baud, 8-N-1 before dialing 313-995-2100. Leave a message for the Sysops (system operator) before hanging up. Tell him you read about GMRS in National Scanning Report.

For more information, write or call Personal Radio Steering Group, P.O. Box 2851, Ann Arbor, MI 48106. 313-662-4533 (voice). If enough people become

GMRS licensees, "Little Orphan Radio" could become the "Belle of the Airwaves."

## GMRS FREQUENCIES

Duplex Channels and Designators

Lower Frequency	Upper Frequency	Designator
462.550	467.550	550
462.575	467.575	575
462.600	467.600	600
462.625	467.625	625
462.650	467.650	650
462.675	467.675	675
462.700	467.700	700
462.725	467.725	725

Simplex or Split Frequencies

Frequency	Designator
462.5625	5625
462.5875	5875
462.6125	6125
462.6375	6375
462.6625	6625
462.6875	6875
462.7125	7125